DRAFT MEETING SUMMARY (v.1)

DRAFT - NOT APPROVED BY COMMITTEE

HANFORD ADVISORY BOARD

JOINT MEETING OF THE TANK WASTE COMMITTEE AND BUDGETS AND CONTRACTS COMMITTEE August 9, 2001 Richland, WA

Topics in this Meeting Summary

Welcome and Introductions	1
Comments from the Site Manager	1
Tank Farms Integrated Baseline	
Technical differences between BNFL and Bechtel	3
Project Risks	5
Budget Development Process	
Double Shell Tank Space Optimization Study Update	
Single Shell Tank Pumping Costs	
Assistant Secretary Jesse Roberson's Visit to Hanford	10
Committee Business, Work Planning, and Wrap Up	
Handouts	
Attendees	11

This is only a summary of issues and actions in this meeting. It may not represent the fullness of ideas discussed or opinions given, and should not be used as a substitute for actual public involvement or public comment on any particular topic unless specifically identified as such.

Welcome and Introductions

Denny Newland chaired the meeting, substituting as designated by Leon Swenson, the Tank Waste Committee Chair. This was a joint meeting of the Tank Waste and Budgets & Contracts Committees.

Comments from the Site Manager

Harry Boston, Site Manager of the Department of Energy – Office of River Protection (DOE-ORP), presented the committee with a review DOE-ORP's status and direction. The funding situation for Fiscal Year 2002 looks to be consistent with contract requirements. DOE-ORP also hopes to secure funding through FY 2007, when hot operations of the vitrification facility is scheduled to begin. DOE-ORP has received approval to bring in the necessary senior staff, but he noted that it takes time to bring quality people onto the job. DOE-ORP will be running the largest radiochemical plant in the world. He wants to create an environment that allows operation for the best value to the taxpayers.

Mr. Boston believes DOE-ORP has a sound relationship with the State of Washington based on common objectives and open communication. He knows the State is frustrated that DOE-ORP missed the TPA milestone of July 31st to begin construction on the vitrification plant. The State is fining DOE-ORP for missing that milestone. DOE-ORP has known it would miss that date for a year, but now there is an integrated schedule for starting construction in December 2002 and to achieve hot operations 2007, which DOE-ORP intends to meet. The fine will end when DOE-ORP shows a clear path to construction or actually starts construction.

Funding will be secured when the President signs the FY 2002 budget, hopefully by October 1st. DOE-ORP also likes the Senate's version of the budget, which will ideally provide enough funds to meet TPA requirements.

DOE-ORP is focused on tank integrity in the tank farms and would like the Double Shell Tanks (DST) to last as long as possible. It would probably cost about \$60-100 million to replace a DST. DOE-ORP is re-examining the Single Shell Tanks (SST) to understand their stability, structural integrity, and leak potential. CH2M Hill Hanford Group (CHG) is on or ahead of schedule for interim stabilization. Overall, Mr. Boston is pleased with the level of progress in the tank farms. Recently the Inspector General's office claimed that CHG achieved its fee too easily, but Mr. Boston challenged that assertion. Much of the work was done on or ahead of schedule, and dollars were saved and invested in critical path work; so CHG earned its fee.

Bechtel National is wrapping up its work quickly. BNFL had designed two facilities, but Bechtel advises building one facility to reduce the plant footprint. Designing a safe and reliable facility remains a top priority.

Mr. Boston discussed near-term wins. Next week DOE-ORP will close Wyden's watch list of tanks that can release contaminants. It has submitted a closure package for those tanks that release flammable gas. The Oregon Office of Energy has already reviewed and approved the plan. Also, infrastructure for the vitrification plant is complete and was accomplished for \$9 million under cost on a \$30 million project.

The first generation of facilities is technically sound and provides a good value to the taxpayers. However, the first generation facilities are not good enough to treat all of the waste, as DOE-ORP is involved in a 50-year, \$50 billion cleanup plan. Mr. Boston has been pushing on DOE-Headquarters' (DOE-HQ) to get all the waste treated by 2028 at a reasonable funding level. The treatable low activity waste volume is driven by sodium and sulfate. If DOE-ORP can keep sodium levels down, more waste can be treated. It is working on ensuring a protective, compliant, fundable, technically sound solution. The potential exists to reduce the total cost by many billions of dollars and reduce the timeframe if the following investments are made: 1) Continue to make the Phase 1 (first generation) facilities operational, and 2) invest in technology to complete the entire job with a smaller capital investment.

Mr. Boston urged the HAB to continue to be active advocates for the vitrification project. DOE-ORP has tried to be more communicative by instituting an openness plan.

Committee discussion

- The committees expressed concern about the development of a contentious relationship between stakeholders and DOE. Harry Boston commented that future relationships hinge on the funding process. If DOE-ORP receives enough funding to keep its commitments, then it is a matter of healing the gap between the community and the current administration.
- Recent HAB advice pointed out that cutting funding without due consideration can cost more in the long run, assuming a caretaker status adds to the total cost of the project. Are there monitoring systems on the DSTs? Mr. Boston answered that there are monitors inside the DST and in the annulus. It is also running ultrasonic crawlers.
- What is the average size of the tanks? 1.1 million gallons
- Can you use chemical processes to cut down the waste volume before vitrification? There are many options. One under consideration is removing the liquids and salts from the SSTs, running the waste through a filter, a cesium column, and then a technetium column. The resins would be disposed as high-level waste. Tests will be performed to ensure any processes are safe and protective. The feasibility of this technique will first be tested on one tank.

Tank Farms Integrated Baseline

Steve Wiegman, DOE-ORP, made a presentation on the Tank Farms Integrated Baseline. DOE-ORP is working on integrating Bechtel's baseline by September. Stable funding is vital to save the contractors from having to continually revise the details of the project. There is a chart that shows all the milestones for DOE-ORP and the State; the status of this scheduled is checked monthly. One of the big milestones is the start of construction on the vitrification plant. The TPA date was July 31st. The new date has been identified, but depends on several things, such as permits from the Washington State Department of Health (WDOH). This is a potential fail point. Another important milestone is delivering waste to the vitrification plant, which depends on the construction of infrastructure to retrieve the waste.

Part of the baseline serves as the management summary schedule, providing a quick view of the entire project. There are some outyear issues in the baseline; for example, Phase 2 has not been well planned yet. However, the baseline for Phase 1 is sound and has been reviewed both independently and by DOE-HQ.

Committee discussion

• How long will it take to empty the first tank and vitrify the waste? About two years for the first tank on the schedule. However, during normal operations, it should take 5-6 months per tank.

Technical differences between BNFL and Bechtel

Bill Taylor, DOE-ORP, made a presentation on the technical differences between the baselines of BNFL and Bechtel. He distributed a handout titled "Comparison of Waste Treatment Plant (WTP) Functions and Capabilities."

The changes are in the configuration (footprint) of the plant. Challenge teams studied Bechtel's modifications to BNFL's original plans and made three groupings of recommendations, one of which was to maintain the reliability of the pretreatment plant, identified as the area of highest vulnerability. BNFL thought the equipment would last 40 years, so it was solid and welded in spot, but the challenge team suggested revising that. Bechtel is looking at reconfiguring equipment locations to reduce clutter and provide for easier access for maintenance in the hot cells. This is expected to result in better ability to protect and reduce dose to workers. Making the ion exchange resins remotely maintainable was also fueled by this concept. The laboratory was separated from the treatment plant, which takes it off the critical path list for construction. The building size has also been reduced.

• What was the technical and/or economic logic for BNFL to use the original design? Ron Naventi believes the design was based on a different philosophy of operations used in the United Kingdom as compared to the United States. Bechtel's philosophy is to keep the plant running continuously and perform remote maintenance, while BNFL had assumed planned outages for more extensive maintenance. Bechtel's configuration will make changing the resin and columns more safe and efficient.

Todd Wright and Ken Rueter, both of DOE-ORP, were present to answer questions about the technical design changes. Both have worked at Savannah River and are now working in DOE-ORP's Research and Technology division.

Bill Taylor, DOE-ORP, explained that the April deliverables included a plan to blend waste so the sulfates would not have as deleterious an effect and would instead just make more glass. Todd Wright explained that sulfur is not readily soluble in glass, and the goal is to minimize the amount of glass. There will be five new bubblers installed. Understanding the failure of the bubblers is a focus to get the appropriate amount of sulfur into the glass without hurting the glass.

Committee discussion

- Who worked on this redesign of the WTP? Ron Naventi answered that outside experts (the challenge teams) evaluated the design and determined three areas of focus: 1) operations and maintenance, 2) construction planning, and 3) technology. The challenge team spent 2-3 weeks at DOE-ORP. Areas of concern were the pretreatment facility and separation of the laboratory. Bechtel reduced the number of tanks from the BNFL design, resulting in a reduction of the number and size of tanks in the pretreatment facility, which also reduced size of the facility.
- Are there any alternatives to the BNFL melter design? Ron Naventi answered that Bechtel plans to use a dual heater design, which is the industry standard. Bechtel is considering other melter technologies, such as a cold crucible melter. Melter types affect the permitting process. Bill Taylor added that the general philosophy is to

- maintain as much of the reference design as possible. To change the melter type at this point would be a problem. A committee member commented that many members of the HAB do not believe that the proposed melter technology is "pretty much proven."
- A committee member asked about tank storage issues and plant capacity factors. What happens if pretreatment is running full capacity but the downstream capacity is not equal to that is there any storage capacity? Ron Naventi responded that Bechtel is working on this right now. During a lot of operations, the pumps might only be at 40 or 50% of capacity, which is inefficient and not as safe. This analysis will be to DOE-ORP by the end of the month.
- A committee member commented that it was interesting that the BNFL design appeared to preclude maintenance. He also found it peculiar that Bechtel claims it is making the BNFL design more efficient and less redundant. He worried that the new design may be politically, rather than technically, driven. He noted that the amount of money needed for the waste treatment plant in the baseline is greater than the fixed price contract awarded to Bechtel. That gap in work scope and delay for the project could be exacerbated if the contractor is expected to do more work with less money. Steve Wiegman affirmed that that was a legitimate concern. He pointed out that DOE-ORP has been accused of implementing unnecessarily expensive projects. Both of DOE-ORP's contracts have a baseline cost higher than the contract amount, with the assumption that the contractor can earn a higher amount of fee. Underfunding the baselines forces the contractor to find the money to complete the work, but that can also be a challenge.

Project Risks

Steve Wiegman made a presentation about project risks. He recommended this be a major topic at a future meeting so it could receive the attention it deserves. He distributed a handout titled "Primary RPP Programmatic Concerns." Concurrent concerns are challenging to coordinate. With an integrated delivery system design, all components must work together.

DOE-ORP places heavy emphasis on safe operations. It has a tremendous safety record and stops work if dangers are identified. However, if the waste is not being treated that is also expanding the opportunity to hurt people. Primary concerns for Bechtel are its safety basis; the close-coupled design and construction; and the delivery of an operable, maintainable, and expandable waste treatment plant. Ron Naventi compared the close-coupled design and construction to riding full speed on a train on a railroad where the tracks 10 miles down the line have not yet been built. He assured the committees that Bechtel works on design and construction in a phased, safe manner.

Committee discussion

• What are the five or six top technical risks? Ken Rueter, DOE-ORP, commented that risks are rated as high, moderate, or low. Of the 100 risks, approximately 36 are high risk. All risks are divided into four areas of focus: 1) waste formulation (glass, high activity waste), 2) ion exchange resin performance, 3) material selection and

- application, and 4) integrated plant capability. Of the high-risk items, there are about 8-10 in each of the four categories.
- Do you maintain this list? Yes, it is part of the project process. The risks are integrated into the bigger picture within the tank farm. The risks are tracked on a quarterly basis by DOE-ORP's most senior staff. DOE-ORP does have some skepticism on how to safely scale operations up to the necessary magnitude while maintaining safety. Ron Naventi commented that the risk assessment and mitigation are integrated with the Bechtel design. Bechtel has a list of risks and a schedule of milestones for when the risks need to be mitigated. He welcomed HAB participation in Bechtel's project management meetings when technical risks are reviewed (every other month).

Regulator Perspectives

Washington State Department of Ecology (Ecology)

Melinda Brown commented that Ecology is in discussion with DOE-ORP and has taken punitive actions due to the delayed start of construction on the waste treatment plant. The baseline presented today does not match the TPA milestones.

Nancy Uziemblo, Ecology, commented that Ecology would like to issue the permit as quickly as possible to not exacerbate the delay, but it is difficult to issue a permit based on limited information. Ecology cannot follow normal permitting procedures since design for the facility is not yet complete, but is cooperating with DOE-ORP.

- Are the two Clean Air Act permits more constraining to the start of construction than RCRA permit? Melinda Brown answered yes. A committee member expressed concern that RCRA has more flexibility than the Clean Air Act, and commented on the complex spider web of permitting issues.
- Does Ecology see the permitting process working in a timely manner? Nancy Uziemblo did not foresee any problems with the permits. Ecology is working with EPA, and they are on track.

Melinda Brown commented that Ecology is still concerned with DST integrity, retrieval (how it will be done and when), capacity issues, and DST space issues. There are also concerns about SST integrity. Negotiations on July 13th did not yield an agreement. Ecology is also concerned about compliance with the TPA (particularly with the delay in construction of the vitrification plant) and changes in the contracting regimen.

Washington State Department of Health (WDOH)

Al Conklin reported that there are many challenges regarding Washington State and the federal Clean Air Act, especially in relation to radionuclides. DOE-ORP is aware of the problems, which hopefully will not delay the project. The licensing process is extensive and requires nearly 100% design completion, but WDOH has been able to issue some phased permitting.

This is the biggest project WDOH has ever licensed. The potential for offsite emissions is tremendous, so it must be sure the technology to control emissions is in place. Increasing throughput by four times could trigger the entire licensing process again, since the license is for a specific throughput. WDOH is concerned that construction will be completed, and then DOE-ORP will ask for exemptions from the standards.

WDOH is concerned with radiation protection and wants to be sure DOE-ORP accepts full liability for the design and equipment. WDOH will hold DOE-ORP responsible and base its assessment on offsite dose. Another challenge is marrying new technology with the old technology in the tank farms during waste retrieval.

Committee discussion

- It might be beneficial for DOE-ORP to include the various components of design in support of the various permits in its baseline. Steve Wiegman explained that DOE-ORP cannot hold its contractors responsible for an outside agency deliverable.
- What prevents the contractors from completing all the necessary information on the permit applications? Al Conklin explained that this project is different than everything else, so there are associated limitations. Steve Wiegman voiced his primary concern of identifying who is making sure that information is complete.
- A committee member asked if DOE-ORP incentivized the contractor (through either a penalty or incentive payment) based upon the completeness of application for permits? The committee urged DOE-ORP to consider holding the contractor accountable for either the permit or the adequacy of permit submissions.
- As long as the DOE-ORP budgets plan on flat funding, how will that affect permitting? Al Conklin answered that WDOH has tried to convince DOE-ORP and Bechtel to contract with people on site who are used to writing permits, which will help in the long run.

Budget Development Process

The DOE-ORP budget staff was not available to attend the joint committee meeting, but the committee still chose to discuss the budget development process for the upcoming year. Denny Newland explained that both DOE-RL and DOE-ORP are using baselines as the basis for budget submittals and planning. There is conceptual agreement with DOE-RL that in the November/December timeframe (before the President's budget is released in January), the HAB and DOE would work together to run identify and analyze different scenarios to understand the effect of the actual budget guidance, particularly if the budget is less than necessary. This will prepare the HAB to respond to the President's budget submittal in January.

Steve Wiegman commented that DOE-ORP's baseline is different from DOE-RL's baseline because DOE-ORP is managing a single project with multiple facets, while DOE-RL has multiple projects with multiple facets. If the budget were low, DOE-ORP would share its prioritization criteria and develop a budget from that. DOE-ORP would also develop a compliance budget case for TPA milestones.

Denny Newland commented that Maynard Plahuta, Gerry Pollet and he are issue managers to develop HAB thoughts about a new budget process that would allow the HAB, the regulators, and any others to provide input on the DOE budget process.

- From a HAB and regulatory perspective, it is important to track dollars for each of the project lines. Steve Wiegman responded that currently, it is shown on the P3 schedule and estimate sheets.
- The committee reminded DOE-ORP to consider how to present baseline information to the public, since large posters with tiny font are not easily understood. The baseline system is more visually easy to understand and see the impacts, but is a challenge to present at public meetings. Steve Wiegman agreed and said he was open to suggestions.
- Are there any possibilities of achieving multi-year funding for the tank program? Steve Wiegman answered that that is one of Harry Boston's highest priorities. The committee discussed whether it is appropriate for the committee to bring this issue to the HAB, but it was decided that the Budgets and Contracts Committee should be the lead and that the HAB would need to work with DOE-ORP and DOE-RL on it.

Double Shell Tank Space Optimization Study Update

Joe Cruz, DOE-ORP, gave a summary of the DST Tank optimization study. DST retrieval is a TPA deliverable. The program is has been working with Ecology to assure consistency between documents since the baseline case is not compliant with the TPA. The near term tasks are not compliant. To retrieve all the waste from the SSTs requires a huge amount of DSTs but also breaks rules about more installing infrastructure, since that means there will be more to decommission.

DOE-ORP will not need new DSTs if it gives up on retrieving all the SSTs by 2018 and a treatment plant is completed. New tanks will not be needed if the waste processing is completed by 2028.

- The committee pointed out that the latest interim stabilization report warned of increased volumes. Joe Cruz acknowledged that the volume yields will likely increase
- Is there risk with interim stabilization? Yes, but it could be mitigated. The SST retrievals are more unknown.
- What would it take to lose a DST? The failure of a primary liner of a DST would trigger DOE-ORP to remove most of the volume. A different failure scenario would involve a tank with a lot of pitting. If RCRA decreed that a tank was unfit for use then DOE-ORP would pump it. Ideally, DOE-ORP would prefer to work with Ecology to determine an appropriate course of action.

Melinda Brown, Ecology, commented that Ecology would not relax the 2018 deadline or any other milestones and will not ask for new tanks.

Joe Cruz explained that TPA Milestone M-45-12 would provide DST space to allow SST retrieval. He summarized that any commitments for DST space will maximize cost efficiency and minimize risk. DOE-ORP will start talking about SST milestones because of the upcoming milestone negotiations if the treatment plant was online, but now it must pursue incremental negotiation.

• At Savannah River, tank treatment is producing more waste to be returned to its tanks than is being taken out and vitrified. Could this be a concern at Hanford? Joe Cruz answered that Savannah River had different methods to manage space, and it is more of an operational facility. Also, the DOE-ORP model for space projections is more sophisticated than theirs. A follow-on question was whether DOE-ORP was assuming that no liquid waste would be returning to the tanks. Joe Cruz explained that the biggest impact from the WTP would be ETF since a lot of dilute water will be sent there. If the water was very dilute, it could be reused. Otherwise, space will need to be dedicated for the water instead of SST retrieval.

Single Shell Tank Pumping Costs

Dana Bryson, DOE-ORP, gave a presentation on Single Shell Tank Pumping Costs. DOE-ORP's funding requirements for the interim stabilization project were written into the consent decree. Its adjusted budget for the project is for interim stabilization and isolation of those tanks to prevent further intrusions. The work scope is primarily in FY05. The consent decree was based on a project plan with basic assumptions. One was that one transfer line per year would be lost due to failure. Per the consent decree, DOE-ORP had an option to request relief, but it has not done so in order to stay on schedule.

Committee discussion

- What is the broader impact of these cost overruns? Dana Bryce explained that in 1999 there was a \$3 million overrun. In 2000 it was about \$1 million, and 2001 looks to be on target. In total that is a \$4 million overrun, which can be attributed to extra work scope and delays.
- How much contingency was built in? Do you need to forecast greater contingency in the future? Dana Bryson answered that DOE-ORP will have to improve its assumptions and either increase contingency or plan for the increased number of future line failures.
- A committee member commented that originally the consent decree was based on budgets, but DOE-ORP said it did not know the work elements necessary for pumping out SSTs. Then it ended up costing more than expected. Have each of the elements that cost more been transferred forward into the other baselines? Dana Bryson responded that a project management plan budgets for assumptions. In this case, DOE-ORP set a schedule then did the project management plan. Instead it should have let the regulators look at the situation and then determine the milestones.
- Your document suggests that you are estimating the outyear cost will be less than the consent decree requirements. Dana Bryson explained that the consent decree includes estimates tied to the current notion of funding.

• The committee voiced criticism that the consent decree contained costs that had not been validated. If the costs were more, then less work would be done; if the costs were less than more work could have been done.

Regulator response

Ecology

Melinda Brown commented that interim stabilization was a commitment for the FY03 budget. She added that project management plans are based on assumptions and acknowledged the unknowns. Some tanks are pumping slower than had anticipated due to needing more water to remove all the waste, mechanical failures, line failures, and other unforeseen events. Overall, there are more physical and mechanical problems than philosophical or regulatory problems.

Abandoning the process is not right. It is frustrating to hear of multiple shut downs or breakages, but Ecology will accept nothing less than 100% commitment to interim stabilization. She supported Dana Bryson's believe that the SST project was funded because of the consent decree.

For the FY02 and FY03 budgets, are you using the consent decree figure or the validated baseline figure? Dana Bryson answered that the consent decree numbers were meant as a tool, and the budget is always based on the best information available. DOE-ORP laid out what it considered to be a reasonable budget at the time in the consent decree. That way, if there was an unforeseen need, and DOE-ORP had spent the amount in the consent decree, then it would have had a basis to go back to the court. Melinda Brown added that there was no agreement; it was just an estimate so everyone knew going in what we thought we could start at as a baseline.

Assistant Secretary Jesse Roberson's Visit to Hanford

The committee decided to monitor the issue, but that no further action was necessary. Harold Heacock announced that Jesse Roberson, the new Assistant Secretary for Environmental Management of DOE is coming to Hanford. The HAB leadership group has the opportunity to have a 45-minute breakfast meeting with her. The leadership group will meet in advance to develop a script. He asked committee members to think about topics they would like addressed at that meeting and forward them to the facilitation team.

Inspector General's Report

It was announced that the Inspector General's (IG) report on performance-based incentives for the CH2M Hill Hanford Group contract with DOE-ORP was available. Members of the Budgets and Contracts Committee were urged to review the document as well as upcoming budget reports. Steve Wiegman commented that he had been interviewed during the IG evaluation. The evaluation had examined the performance

incentives before the contract was finalized, so the report is actually not related to the current contract. For example, the report was critical of Project 519, which has since come in significantly under budget.

• Does DOE-ORP agree with the findings of the IG Report? Steve Wiegman indicated that DOE-ORP agreed in general and did take the report into account when negotiating new the set of performance incentives.

Committee Business, Work Planning, and Wrap Up

The Tank Waste Committee adopted the summary from its May 16th joint meeting with the Budgets and Contracts Committee. Then it discussed updates to its work plan. Issue managers had outlined five issues: 1) schedule and the TPA, 2) the technical approach, 3) technical risks, 4) programmatic risks, and 5) funding profile. Paige Knight, Harold Heacock, and Todd Martin volunteered to be issue managers for the technical risk issue.

Handouts

- Tank Waste and Budgets & Contracts Joint Meeting, August 9, 2001
- DOE-ORP's Primary Programmatic Concerns, August 9, 2001
- Inspector General's Report: Inspection of Selected Aspects of the Office of River Protection Performance-Based Incentive Program, June 2001
- Baseline Management, August 2001
- DST Space Update by Joe Cruz, August 9, 2001
- DOE-ORP's Interim Stabilization Project, August 9, 2001
- Comparison of WTP Functions and Capabilities
- Ecology News Release "State rejects requested Hanford cleanup delay and levies penalties," July 26, 2001
- DOE-ORP Press Release, "Statement by Office of River Protection Manager Harry Boston," July 26, 2001
- Final Determination pursuant to the Hanford Federal Facility Agreement and Consent Order disapproving DOE's Change Control Form M-62-01-02, July 26, 2001
- DOE-ORP Response to HAB Advice #116
- DOE-ORP Memorandum re: FY 2003 Budget Submission for DOE-ORP, June 1, 2001

Attendees

HAB Members and Alternates

Al Conklin	Jim Cochran	Jim Curdy
Harold Heacock	Paige Knight (phone)	Dave Johnson (phone)
Robert Larson	Jeff Luke	Todd Martin
Denny Newland	Maynard Plahuta	Gerry Pollet
Keith Smith		

Others

Gail McClure, DOE-RL	Melinda Brown, Ecology	Nancy Myers, BHI
Rudy Carreon, DOE-ORP	Max Power, Ecology	Suzanne Heaston, BNI
Ken Rueter, DOE-ORP	Nancy Uziemblo, Ecology	Ron Naventi, BNI
Vince Saladin, DOE-ORP		Fran DeLozier, CHG
Steve Wiegman, DOE-ORP		Carolyn Haass, CHG
Todd Wright, DOE-ORP		Mike O'Neill, CHG
		Christina Richmond,
		EnviroIssues
		Ruth Siguenza, EnviroIssues
		Barb Wise, Fluor Hanford
		Peter Bengston, PNNL